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EXAMINER	
DELCOTTO, GREGORY R	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
06/03/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/500,859	AIHARA ET AL.	
	Examiner	Art Unit	
	Gregory R. Del Cotto	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *RCE filed 2/15/08*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8,10 and 11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8,10 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-4, 8, 10, and 11 are pending. Claims 5-7 and 9 have been canceled. Applicant's arguments and amendments filed 2/29/08 have been entered.

Claims 1-4 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 12/4/06.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/15/08 has been entered.

Objections/Rejections Withdrawn

The following objections/rejections as set forth in the Office action 10/11/07 have been withdrawn:

The rejection of claim 5 under 35 U.S.C. 102(b) as being anticipated by Harada et al (US 3,920,392), Michel et al (US 6,030,738), or Baur et al (US 5,500,323) has been withdrawn.

The rejection of claims 5 and 8 under 35 U.S.C. 102(b) as being anticipated by JP 2000-096049 has been withdrawn.

The rejection of claims 5 and 8 under 35 U.S.C. 103(a) as being unpatentable over Jeschke et al (US 6,251,849) or Aubay et al (6,593,288), both in view of Harada et al (US 3,920,392) has been withdrawn.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 recites the limitation "said concentration" in line 1. There is insufficient antecedent basis for this limitation in the claim. Note that, there is no mention of the word "concentration" in claim 8 and it is unclear what concentration is being referred to and in what context it is being used. Clarificaiton is required. For purposes of examination and consistent with page 10, lines 1-8 of the instant specification, the Examiner has interpreted "said concentration" to be referring to the concentration of the polymer component.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 8, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeschke et al (US 6,251,849) or Aubay et al (6,593,288), both in view of Harada et al (US 3,920,392) and Aubay et al (US 6,703,358) or Pucci et al (US 5,872,088).

Jeschke et al teach the use of water-based cleaners for hard surfaces containing from 0.01 to 10% by weight of cationic polymers containing monomer units having the same formula as recited by the instant claims, and 0.1 to 50% by weight of one or more nonionic surfactants. See column 2, line 30 to column 3, line 15. Additionally, the cleaning compositions may contain auxiliaries such as solvents in ethanol, isopropanol,

glycol ether, etc. See column 4, lines 50-69. In one embodiment, the cleaner is formulated as a ready-to-use solution which may be used as a spray cleaner. The cleaners are suitable as both multipurpose cleaners and as manual dishwashing detergents. The cleaners are particularly suitable for cleaning hard surfaces such as enamel, glass, china, linoleum, ceramic tiles, marble, metals, etc. See column 5, lines 55-69.

Specifically, Jeschke et al teach a bath cleaning composition in the mildly acidic range containing 3.85% of a C8-C10 alkyl polyglucoside, 1% of a C12-C14 fatty alcohol ether having 6 moles of EO, 1% sodium hydroxide, 1% ethanol, 0.3% of various polymers which contain the same monomers as recited by the instant claims, 0.2% preservative, 0.9% perfume oil and the balance water.

'288 teaches the use of a water-soluble or water-dispersible copolymer comprising monomers including dimethyldiallylammonium chloride, at least one hydrophilic monomer, and optionally at least one hydrophilic monomer compound containing ethylenic unsaturation and of neutral charge, on hard surfaces to give a hard surface hydrophilic properties. See Abstract. The copolymer preferably has a molecular weight of at least 1000, advantageously of at least 10,000. See column 3, lines 35-45. The copolymers are used in compositions for cleaning ceramics such as bathrooms, sinks, shower walls, toilet pans, etc. See column 5, lines 40-55. The polymers containing DADMAC have hydrophilic properties to give the hard surface long-lasting hydrophilic properties so as to avoid the subsequent presence of marks due in particular to the drying of droplets of water deposited on said surface. See column 1,

lines 5-15. Additionally, the compositions contain surfactants. See column 11, lines 50-65. Specifically, '288 teaches a detergent formulation for cleaning hard surfaces such as tiles, sinks, baths, etc. containing 24% sodium sulfonate, 5% ethoxylated C12 fatty alcohol, 4% ethanol, polymer, and water. Note that, the Examiner asserts that the teachings of '288 suggest compositions having the same antifouling properties as recited by the instant claims because '288 suggest compositions containing the same components in the same proportions as recited by the instant claims.

Jeschke et al or Aubay et al do not teach the specific polymer as recited by the instant claims or a method of treating a toilet bowl surface using a composition containing the specific cationic polymer, surfactant, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

Harada et al teach a metal corrosion inhibitor consisting of a polysulfone compound obtained by copolymerizing or interpolymerizing sulfur dioxide and at least one 1,6-diene compound. The metal corrosion inhibitor may be added in a corrosion inhibitorily effective amount, preferably at least 1 ppm, to a corrosive medium, with which a metal comes into contact, to inhibit the medium from corroding the metal. See Abstract. Note that, Harada et al exemplify polymers which are the same as recited by the instant claims. See column 7 line 1 to column 8, line 60. Sulfur dioxide is very easily copolymerized with at least one other monomer. See column 5, lines 20-35.

'358 teaches a cleaning composition for hard surfaces including ceramic, tile or glass-type comprising at least one surfactant and a water soluble or water-dispersible copolymer. See Abstract and column 1, lines 1-5. The copolymer according to the

invention advantageously has a weight-average molecular mass of at least 1000 up to 10,000,000. See column 3, lines 1-10. The composition may also be used for cleaning toilet bowls and includes from 0.05% to 5% by weight of a water-soluble or water-dispersible copolymer, from 0.1 to 40% by weight of an inorganic acid cleaning agent, from 0.5 to 10% by weight of a surfactant, from 0.1 to 3% by weight of a thickener, and additives. See claim 6.

Pucci et al teach hard surface cleaning compositions which are viscous but at the same time easy to rinse. Such compositions are formulated by using a linear C6-C16 alcohol and/or linear alkoxylated C6-C16 alcohol, a hydrotropic solvent, and an anionic surfactant. See Abstract. An advantage of the viscous compositions is that they may be used in a wide range of applications in bathrooms, kitchens, floors, and especially on any vertical surface like walls, toilet bowls, and the like. See column 2, lines 5-15. The compositions of the present invention comprise from 0.1% to 20% by weight of the total compositions of said linear alcohol. See column 3, lines 30-40.

It would have been obvious to one of ordinary skill in the art to use a sulfone monomer in the polymer compounds taught by Jeschke et al or Aubay et al, with a reasonable expectation of success, because Harada et al teach that sulfur dioxide is a very easily copolymerizable monomer which provides corrosion inhibiting properties and further, Jeschke et al or Aubay et al teach that DADMAC may be copolymerized with various monomers in general and corrosion resistance would desirable in the hard surface cleaners as taught by Jeschke et al or Aubay et al.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use the composition as taught by Jeschke et al or Aubay et al, to clean toilet bowls, with a reasonable expectation of success, because '358 or Pucci et al teach the use of a similar composition for cleaning hard surfaces in general including toilet bowls, ceramic, etc., and further, Jeschke et al or Aubay et al ('288) teach the cleaning of hard surfaces in general which would encompass toilet bowls.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to treat toilet bowl surfaces using a composition containing the specific cationic polymer, surfactant, and the other requisite components of the composition in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because the broad teachings of Jeschke et al or Aubay et al, both in combination Harada et al and '358 or Pucci et al suggest a method of treating a toilet bowl surface using a composition containing the specific cationic polymer, surfactant, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

Response to Arguments

With respect to the rejection of the instant claims under 35 USC 103(a) using Jeschke et al or Aubay et al, both in combination with Harada et al, Applicant states that while Harada et al is relied upon for its disclosure of a sulfone containing polymer used as corrosion inhibitor for metals in water, there is no motivation to combine the references. Further, Applicant states the references differ in their basic mode of use since both Jeschke et al an Aubay et al are drawn to compositions for hard surface

treatment in which the surface is treated and dried while Harada et al teaches a corrosion inhibitor for industrial water in which the water is in constant contact with a metal surface subject to corrosion. Also, Applicant states that the Examiner's rejection appears to be based on the belief that Harada et al describe SO2 as a very easily copolymerizable monomer but that the ease of incorporation of an SO2 monomer fails to provide motivation to do so. In response, note that, the Examiner maintains that Jeschke et al and Aubay et al are drawn to liquid surface treatment compositions in that they are both drawn to cleaning compositions for multiple types of surfaces including metal (i.e., steel) which is subject to corrosion. While the soil release properties of the polymers are tested by treating the surface followed by drying the surface, the Examiner asserts that this is done for purposes of testing the polymer and is not done in the actual use of the compositions taught by Jeschke et al or Aubay et al. Furthermore, drying the cleaning compositions is a normal occurence of the process of cleaning and substrate and is not out of the ordinary. Additionally, Jeschke et al and Aubay et al teach the use of polymers and copolymers containing DADMAC (dimethyldiallylammonium chloride) monomers which may be copolymerized with numerous additional monomers. Harada et al is a secondary reference relied upon for its teaching of the incorporation of SO2 monomers into polymers containing DADMAC and that such incorporation greatly improves the corrosion inhibition properties of that polymer.

The Examiner maintains that one of ordinary skill in the art clearly would have been motivated to use an SO2 monomer in the polymer compounds taught by Jeschke et al or Aubay et al, with a reasonable expectation of success, because Harada et al

teach that sulfur dioxide is a very easily copolymerizable monomer which provides corrosion inhibiting properties and further, Jeschke et al or Aubay et al teach that DADMAC may be copolymerized with various monomers in general and corrosion resistance would desirable in the hard surface cleaners as taught by Jeschke et al or Aubay et al which can be used on metal surfaces.

Additionally, with respect to Applicant's arguments of ease of incorporation into polymers containing DADMAC, this is not the Examiner's own belief or observation but is explicitly stated in Harada et al, as pointed out by Applicant, wherein it is stated that "in the preparation of the polysulfone compound as the corrosion inhibitor, sulfur dioxide is very easily copolymerized with at least one monomer..." (See column 5, lines 20-35 of Harada et al). Thus, there is specific recognition in the prior art that SO2 is easily polymerized to provide a corrosion inhibiting copolymer containing the same monomers as recited by the instant claims, which makes it predictable that the SO2 monomer can be polymerized with the monomers taught by Jeschke et al or Aubay et al to provide a corrosion inhibiting polymer and would motivate one of ordinary skill in the art to do so.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Remaining references cited but not relied upon are considered to be cumulative to or less pertinent than those relied upon or discussed above.

Applicant is reminded that any evidence to be presented in accordance with 37 CFR 1.131 or 1.132 should be submitted before final rejection in order to be considered timely.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory R. Del Cotto whose telephone number is (571) 272-1312. The examiner can normally be reached on Mon. thru Fri. from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory R. Del Cotto/
Primary Examiner, Art Unit 1796

/G. R. D./
May 27, 2008